

ABSTRACT OF THE DISCLOSURE

A multi-wavelength optical packet switch system with shared output buffer is disclosed, which includes N input fibers, N output fibers, an input device, a wavelength converter, a wavelength router, an output buffer, a wavelength classifier and a control device. The present invention utilizes both the tunable wavelength converter and the wavelength router to accomplish multi-wavelength optical packet switching. The present invention also provides the output buffer connected to the output of the wavelength router for being shared by optical packets in all wavelengths (channels), thereby avoiding the packet loss due to output conflicts and reducing the cost of establishing the buffer.